

## In The Claims

Please amend the claims as follows:

Claims:

1. (Currently Amended) A process for the preparation of an olefin homopolymer or copolymer comprising polymerising at least one C<sub>2-20</sub>- $\alpha$ -olefin in slurry phase in the presence of:

(a) a metallocene compound of formula I:



wherein:

Cp is an optionally substituted and/or optionally fused homo- or heterocyclopentadienyl ligand;

Cp' is a cyclopentadienyl substituted by at least one C<sub>1-20</sub>-alkyl group;

R is a bridge of 1-7 bridging atoms;

M is a group 4 to 6 transition metal;

each X is -CH<sub>2</sub>-Y, wherein Y is at least one selected from the group consisting of: C<sub>6-20</sub>-aryl, C<sub>6-20</sub>-heteroaryl, C<sub>1-20</sub>-alkoxy, C<sub>6-20</sub>-aryloxy, -NR'<sub>2</sub>, -SR', -PR'<sub>3</sub>, -SiR'<sub>3</sub>, -OSiR'<sub>3</sub> and/or halogen;

R' is C<sub>1-20</sub>-hydrocarbyl or in case of -NR'<sub>2</sub>, the two substituents R' can form a ring together with the nitrogen atom wherein they are attached to;

and each non-cyclopentadienyl ring moiety can further be substituted;

n is 0 or 1; and

(~~bII~~) an aluminoxane.

2. (Original) A process as claimed in claim 1 wherein n is 0.

3. (Currently Amended) A process as claimed in claim 1 ~~or 2~~, wherein Cp is optionally substituted by at least one substituent selected from the group consisting of: halogen, C<sub>1-20</sub>-alkyl, -C<sub>2-20</sub>-alkenyl, C<sub>2-20</sub>-alkynyl, C<sub>3-12</sub>-cycloalkyl, C<sub>6-20</sub>-aryl or C<sub>7-20</sub>-arylalkyl, C<sub>3-12</sub>-heterocycloalkyl which contains 1, 2, 3 or 4 heteroatom(s) in the ring moiety, C<sub>5-20</sub>-heteroaryl, C<sub>1-20</sub>-haloalkyl, -SiR"<sub>3</sub>, -OSiR"<sub>3</sub>, -SR", -PR"<sub>2</sub> and ~~or~~ -NR"<sub>2</sub>.

4. (Currently Amended) A process as claimed in ~~any one of claims 1 to 3~~, wherein Cp denotes optionally substituted by at least one substituent selected from the group consisting of: cyclopentadienyl, indenyl, tetrahydroindenyl, benzindenyl ~~or~~ and fluorenyl.

5. (Original) A process as claimed in claim 4 wherein Cp denotes optionally substituted cyclopentadienyl.

6. (Currently Amended) A process as claimed in claim ~~6~~ 1 wherein the Cp and Cp" groups are identical.

7. (Currently Amended) A process as claimed in ~~any one of claims 2 to 7~~, wherein the Cp and Cp" groups carry 1 to 5 C<sub>1-6</sub>-alkyl substituents.

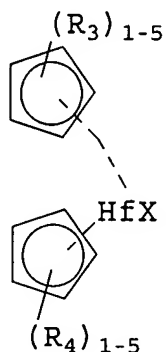
8. (Currently Amended) A process as claimed in claim 1 to 7 wherein M is Hf.

9. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 8~~ wherein  $-\text{CH}_2-\text{Y}$  is benzyl or  $-\text{CH}_2-\text{SiR}'_3$ .

10. (Original) A process as claimed in claims 1 wherein said metallocene is of formula (II)

(II)

wherein  $\text{R}_3$  is a  $\text{C}_1$ -substituent,  $\text{R}_4$  is groups are either wherein  $\text{R}'$  is  $\text{C}_1$ -



$\text{C}_6$ -alkyl or siloxy  
a  $\text{C}_1$ - $\text{C}_6$ -alkyl, and both  $\text{X}'$   
benzyl (Bz) or  $\text{CH}_2\text{SiR}'_3$   
 $\text{C}_{20}$ -hydrocarbyl.

11. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 10~~ wherein said slurry phase is carried out in a loop reactor.

12. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 11~~ wherein said slurry phase polymerisation is one stage of a multistage polymerisation.

13. (Original) A process as claimed in claim 12 wherein subsequent to said slurry phase polymerisation there is a gas phase polymerisation.

14. (Original) A process as claimed in claim 13 wherein the weight ratio of produced polymer in the slurry phase:

gas phase is 60:40 to 40:60.

15. (Currently Amended) A process as claimed in claim 13 ~~or 14~~, wherein said polymerisation ~~comprises~~ consists of two stages, a slurry phase and a gas phase stage.

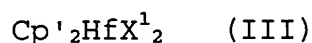
16. (Original) A process as claimed in claim 13 wherein said gas phase polymerization is itself followed by a further gas phase polymerisation stage.

17. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 16~~ wherein the metallocene is prepolymerised.

18. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 17~~, wherein said olefin homopolymer or copolymer is an ethylene homopolymer or ethylene copolymer with a C<sub>3-6</sub>-comonomer.

19. (Currently Amended) A process as claimed in ~~any one of~~ claims 1 ~~to 18~~, wherein said metallocene is supported on a carrier.

20. (Currently Amended) A Mmetallocene compounds of formula (III)



wherein each Cp' denotes a mono or di C<sub>1-6</sub>-alkyl-substituted cyclopentadienyl, X<sup>1</sup> is benzyl or CH<sub>2</sub>SiR'<sub>3</sub> in which R' is C<sub>1-20</sub>-hydrocarbyl.

21. (Currently Amended) ~~A~~The metallocene compound as claimed in claim 20 wherein R' is methyl.

22. (Currently Amended) ~~The~~A metallocene compounds selected from the group consisting of:

bis(n-butylcyclopentadienyl)Hf dibenzyl,

bis(methylcyclopentadienyl)Hf dibenzyl,

bis(1,2-dimethylcyclopentadienyl)Hf dibenzyl,

bis(n-butylindenyl) Hf dibenzyl,

bis(methylindenyl) Hf dibenzyl,

bis(dimethylindenyl) Hf dibenzyl,

bis(n-propylcyclopentadienyl)Hf dibenzyl,

bis(i-propylcyclopentadienyl)Hf dibenzyl,

bis(n-butylcyclopentadienyl) Hf (CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>,

bis(n-propylcyclopentadienyl) Hf (CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>,

bis(i-propylcyclopentadienyl) Hf (CH<sub>2</sub>SiMe<sub>3</sub>)<sub>2</sub>, and mixtures thereof.

23. (Currently Amended) An olefin produced by a process as ~~elaimed in any one of claims 1 to 19~~for the preparation of an olefin homopolymer or copolymer comprising polymerising at least one C<sub>2-20</sub>- $\alpha$ -olefin in slurry phase in the presence of:

(a) a metallocene compound of formula I:



wherein:

Cp is an optionally substituted and/or optionally fused homo- or heterocyclopentadienyl ligand;

Cp'' is a cyclopentadienyl substituted by at least one C<sub>1-20</sub>-alkyl group;

R is a bridge of 1-7 bridging atoms;

M is a group 4 to 6 transition metal;

each X is -CH<sub>2</sub>-Y, wherein Y is at least one selected from the group consisting of: C<sub>6-20</sub>-aryl, C<sub>6-20</sub>-heteroaryl, C<sub>1-20</sub>-alkoxy, C<sub>6-20</sub>-aryloxy, -NR'<sub>2</sub>, -SR', -PR'<sub>3</sub>, -SiR'<sub>3</sub>, -OSiR'<sub>3</sub> and halogen;

R' is C<sub>1-20</sub>-hydrocarbyl or in case of -NR'<sub>2</sub>, the two substituents R' can form a ring together with the nitrogen atom wherein they are attached to;

and each non-cyclopentadienyl ring moiety can further be substituted;

n is 0 or 1; and

(b) an aluminoxane.